

Follow-up Pass Rate (FPR)

The Follow-up Pass Rate is a long-term STAR performance measure that evaluates the performance of both stations and technicians. It is the only performance measure that evaluates the performance of a technician to determine a station's eligibility for the STAR Program. For this reason, FPR scores are given to both Smog Check stations and technicians.

The FPR performance measure examines whether vehicles certified by stations and technicians in their previous inspection cycle are passing their current initial inspection at a higher or lower rate than expected for "similar vehicles." Station FPR scores reflect the performance of the station at the time the vehicles were previously certified. Technician FPR scores reflect the performance of the technician at the time they last certified the vehicle, regardless of the station at which the technician worked when he/she previously certified the vehicle. Smog Check inspection performance during the previous inspection cycle is measured by comparing, in the current cycle, the actual failure rate on initial tests to the expected failure rate for similar vehicles statewide. An initial inspection may be an official inspection or a pretest and is the first test performed on a vehicle in its current inspection cycle, which may be for biennial inspection, change-of-ownership, or initial registration. Previously certified vehicles passing at a higher rate than similar vehicles in the current inspection cycle is an indicator of better Smog Check inspection performance in the previous inspection cycle. "Similar vehicles" means vehicles of the same model year, make, model, engine displacement, transmission type, and body style.

To better understand how this performance measure works, consider the following conceptual example. Two-hundred 1995 Ford Mustangs, with 5.0 liter engines, were gross polluting at the start of their previous inspection cycle. Half of these vehicles were tested improperly and certified to get the vehicles to pass without the necessary emissions repairs. The other half were tested properly, failed the inspection, repaired properly, and then certified properly. Vehicles from which of the two populations will pass at a lower rate in their next inspection cycle?

The answer to this question is clear. Unless the improperly tested vehicles received some repairs subsequent to their last inspection, they will continue to be high-polluting vehicles in their current inspection cycle. Some of the vehicles that were properly inspected, repaired, and certified in the previous inspection cycle may fall into disrepair by the time of their next inspection cycle. However, a majority of these repaired vehicles will continue to have comparatively lower emissions levels when inspected in the next inspection cycle. As a result, the vehicles that were properly inspected, repaired, and certified will fail at a much lower rate in their next inspection cycle.

FPR scores range from zero to one. A score of zero means that we are 100% confident that the performance at a station or by a technician is below average in comparison to other stations or technicians. In other words, that station or technician is, for the most part, not performing proper inspections. A score of one means we are 100% confident that the performance at a station or by a technician is above average. In other words, that station or technician is, for the most part, performing proper inspections. FPR scores are calculated twice a year, on July 1 and January 1.

Since the FPR performance measure examines whether vehicles certified in their previous inspection cycle are passing their current inspection at a higher or lower rate than expected, newly licensed stations and technicians will initially not have an FPR score. FPR scores for new stations and technicians can be produced once the vehicles they have certified are tested in their next inspection cycle. Similarly, stations and technicians with extremely low test volumes cannot be evaluated on the FPR because there is insufficient data to form a statistically valid assessment of their performance. In cases where an FPR score cannot be produced, the FPR result is left blank on the STAR Web page.

Because the FPR simply compares the failure rate of a station and technician in the current inspection cycle to the expected failure rate for similar vehicles in the same inspection cycle, a number of different inspection-related behaviors can affect one's FPR score. In short, any behavior that helps a vehicle pass an inspection when the vehicle should otherwise fail the inspection will tend to lower the FPR score of a station and/or technician.

Specific behaviors that affect a station's or technician's FPR score include:

1. Clean piping (i.e., passing a vehicle that is out of compliance with the tailpipe emissions standards by introducing a substitute clean exhaust sample through the emissions analyzer)
2. Clean plugging (i.e., using a substitute source of OBD II data for a failing vehicle's OBD II self-diagnostic test)
3. Shifting vehicles into the wrong gear during an ASM test
4. Over-conditioning vehicles (i.e., racing the engine to get a vehicle's catalytic converter hotter than would happen under normal operating conditions)
5. Not identifying visual inspection failures
6. Not identifying functional inspection failures (e.g., fuel cap, ignition timing, low-pressure fuel evaporative emissions)
7. Entering incorrect vehicle parameters to generate more lenient emission standards or a lighter vehicle weight loading (in order to create less treadmill resistance) during an ASM test

Stations and technicians with low FPR scores can improve their performance by performing accurate inspections appropriate to the vehicle being inspected according to the [Smog Check Inspection Procedures Manual](#).

FPR scores displayed on the STAR Web page are color-coded in order to improve clarity. All scores greater than or equal to 0.40 are shown in **green**. Technicians who have a **green** FPR score can work at or be hired by any station, including a STAR certified station. Stations with a **green** FPR score may continue to employ or hire new technicians without an FPR score. For the STAR Program, continued employment or hiring of a technician means for the purpose of performing Smog Check inspections and/or repairs.

FPR scores greater than or equal to 0.10 but less than 0.40 are shown in **yellow**. Stations are not eligible to apply to the STAR Program if they currently employ any technician with a **yellow** FPR score. STAR certified stations may continue to employ a technician who gets a yellow FPR score while employed at that station. However, STAR certified stations hiring a new technician with a **yellow** FPR score may be grounds for invalidation of the station's STAR certification. In addition, STAR certified stations with a **yellow** FPR score may continue to employ a technician without an FPR score. However, STAR certified stations with a **yellow** FPR score that hire a new technician without an FPR score may be grounds for invalidation of the station's STAR certification.

FPR scores less than 0.10 are shown in **red**. STAR certified stations that employ a technician who gets a **red** FPR score, or that hire a new technician with a **red** FPR score, may be grounds for invalidation of the station's STAR certification. In addition, STAR certified stations obtaining a **red** FPR score and either employing a technician or hiring a new technician without an FPR score may be grounds for invalidation of the station's STAR certification.

The following table helps to explain the relationship between station FPR scores, technician FPR scores, and station eligibility to apply for the STAR Program, and finally, station eligibility to maintain its STAR certification once certified.

Station (X) FPR Score	Technician (Y) FPR Score	Station eligible to apply for STAR certification?	STAR certified station eligible to hire that technician to perform Smog Check tests and/or repairs?	STAR certified station may continue employing that technician to perform Smog Check tests and/or repairs?
$X \geq 0.4$	$Y \geq 0.4$	Yes	Yes	Yes
	$0.1 \leq Y < 0.4$	No	No	Yes
	$Y < 0.1$	No	No	No
	No Score	Yes	Yes	Yes
$0.1 \leq X < 0.4$	$Y \geq 0.4$	Yes	Yes	Yes
	$0.1 \leq Y < 0.4$	No	No	Yes
	$Y < 0.1$	No	No	No
	No Score	No	No	Yes
$X < 0.1$	$Y \geq 0.4$	Yes	Yes	Yes
	$0.1 \leq Y < 0.4$	No	No	Yes
	$Y < 0.1$	No	No	No
	No Score	No	No	No
No Score	$Y \geq 0.4$	Yes	Yes	Yes
	$0.1 \leq Y < 0.4$	No	No	Yes
	$Y < 0.1$	No	No	No
	No Score	Yes	Yes	Yes